

## **APPENDIX A SURVEY INSTRUMENTS**

**APPENDIX A.1: HYDROGEN – GENERAL PUBLIC**

**APPENDIX A.2: HYDROGEN – STUDENTS**

**APPENDIX A.3: HYDROGEN – STATE AND LOCAL GOVERNMENT AGENCIES**

**APPENDIX A.4: HYDROGEN – LARGE-SCALE END USER**

**APPENDIX A.1: HYDROGEN – GENERAL PUBLIC**

OPINION RESEARCH CORPORATION

JUNE-JULY 2004

HYDROGEN-GENERAL PUBLIC

ORC # 34556

BALLOT #  
TELEPHONE #  
SURVEY #

CALL

**QUOTA CELLS/TARGETS**

1,000 total respondents

TELEPHONE NUMBER: (\_\_\_\_) \_\_\_\_\_ TIME ENDED: \_\_\_\_\_

TIME STARTED: \_\_\_\_\_

LENGTH: \_\_\_\_\_ (MINUTES)

DATE: \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

I.D.: \_\_\_\_\_

INTERVIEWERS: MAKE SURE YOU HAVE THE FOLLOWING TO GIVE TO RESPONDENTS AS  
NEEDED OR IF REQUESTED:

- OMB CONTROL NUMBER: 1910-5124
- HFCIT WEBSITE URL: [www.eere.energy.gov/hydrogenandfuelcells](http://www.eere.energy.gov/hydrogenandfuelcells)
- IF ASKED AT ANY POINT DURING THE SURVEY, THE INTERVIEWER SHOULD  
TELL THE RESPONDENT THAT THERE ARE NO TRICK QUESTIONS

Hello, I'm \_\_\_\_ calling from Opinion Research Corporation on behalf of the US Department of Energy. Your household has been randomly selected for an important national research survey about new energy sources. I want to assure you we are not selling any products or services.

S1 This survey is to be conducted with one adult, 18 years of age or older, who lives in this household. If there is more than one, may I please speak to the adult in this household who had the most recent birthday?

- 01 YES, SPEAKING
- 02 YES, SOMEONE ELSE
- 03 NO, NOT AVAILABLE NOW
- 04 NO, NOT AVAILABLE UNTIL AFTER FIELD (INSERT LAST DATE OF FIELD)
- 96 BUSINESS -->THANK AND RECORD AS UNUSABLE; BUSINESS
- 97 GROUP QUARTERS --> THANK AND RECORD AS UNUSABLE; GROUP QUARTERS
- 98 OTHER NON-HOUSEHOLD --> THANK AND RECORD AS UNUSABLE; OTHER NON-HOUSEHOLD
- 99 REFUSED---> THANK, RECORD AS REFUSED AFTER INTRO/HH

IF S1(01), CONTINUE TO S2  
IF S1 (02), CONTINUE  
IF S1 (03), SET CALL BACK, RECORD FIRST NAME FOR REFERENCE  
IF S1(04), THANK AND RECORD AS UNAVAILABLE TILL AFTER FIELD

WHEN RESPONDENT ON THE PHONE/ON CALLBACK : [READ AS NEEDED]

Hello, I'm \_\_\_\_ calling from Opinion Research Corporation. We're conducting a research survey on behalf of the U.S. Department of Energy about your knowledge and opinions about hydrogen, fuel cells, and the hydrogen economy. The survey takes about 12 minutes to complete.

S2 While your responses are voluntary, every response is extremely important because the results to this survey will be used to help design the hydrogen education program for the U.S. Department of Energy. Your responses are confidential and will not be associated with your household in any way.

- 01 OK TO CONTINUE
- 02 NOT CONVENIENT, SET CALL BACK APPOINTMENT
- 99 REFUSED --> RECORD AS REFUSED AFTER INTRO/RESP IDENTIFIED

RECORD GENDER

MALE\_\_\_\_

FEMALE\_\_\_\_\_

Before we get started, I want to mention that there are both technical and opinion questions in the survey. Tell me what you think or believe, but keep in mind that “no opinion” or “don’t know” are perfectly acceptable responses.

First of all . . .

Q1 I am going to read several statements. After each one, please tell me if you believe the statement is true, if it is false, or if you don’t know. [READ AND ROTATE STATEMENTS]

- 01 True
- 02 False
- 99 Don’t Know

- A. Hydrogen pipelines exist nationwide
- B. In a hydrogen economy, hydrogen replaces fossil fuels as the dominant form of energy
- C. Hydrogen gas is toxic
- D. Fuel cells produce electricity through hydrogen combustion
- E. Hydrogen is too dangerous for everyday use by the general public
- F. OMITTED
- G. Hydrogen is lighter than air
- H. Hydrogen has a distinct odor

Q2A For the next question, I will ask you to rank four items. It may be easier if you write them down. Do you need a moment to get something to write with?

The factors are: [READ AND ROTATE FACTORS]. Now, please tell me which factor is MOST important to you, personally, when selecting a fuel or power supply? [RE-READ ENTIRE LIST AS NEEDED. IF RESPONDENT CAN’T SELECT ONE ANSWER, ACCEPT MULTIPLE RESPONSES]

- 01 Safety
- 02 Low cost
- 03 Environmental protection
- 04 Convenience
- 99 DON’T KNOW/REFUSED/NO RESPONSE

[IF 2 OR 3 ITEMS REMAIN FROM Q2A, ASK FOR EACH NOT MENTIONED]

Q2B Now, from the remaining factors, which one of the following is MOST IMPORTANT to you when selecting a fuel or power supply? [READ AND ROTATE LIST. IF RESPONDENT CAN’T SELECT ONE ANSWER, ACCEPT MULTIPLE RESPONSES]

- 01 Safety
- 02 Low cost
- 03 Environmental protection
- 04 Convenience
- 99 DON’T KNOW/REFUSED/NO RESPONSE

[IF 2 ITEMS REMAIN FROM Q2A AND Q2B, ASK FOR EACH NOT MENTIONED]

Q2C Finally, which of the following factors is MORE IMPORTANT to you when selecting a fuel or power supply? [READ AND ROTATE LIST. IF RESPONDENT CAN'T SELECT ONE ANSWER, ACCEPT MULTIPLE RESPONSES]

- 01 Safety
- 02 Low cost
- 03 Environmental protection
- 04 Convenience
- 99 DON'T KNOW/REFUSED/NO RESPONSE

In the next few questions please choose the ONE answer you believe is correct. Keep in mind that you can answer "I don't know" or "I have no opinion."

Q3A In which state or condition can hydrogen be stored? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-02]

- 01 Chemical compound
- 02 Liquid
- 03 Both of these
- 04 Or, neither of these
- 99 Don't know/No opinion

Q3B When using pure hydrogen, fuel cell vehicles generate electricity, water, and what else? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 Carbon dioxide
- 02 Nitrous oxides
- 03 Heat
- 04 Or, all of these
- 99 Don't know/No opinion

Q3C Hydrogen can be produced using which of the following sources of energy? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 Natural gas
- 02 Sunlight
- 03 Organic matter
- 04 Or, all of these
- 99 Don't know/No opinion

Q3D Which of the following would you MOST closely associate with the word "hydrogen"? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 01 The H-bomb
- 02 Chemistry class
- 03 Fuel
- 04 Or, the Hindenburg
- 99 Don't know/No opinion

Q3E How would you feel if your local gas station also sold hydrogen? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 01 Frightened
- 02 Uneasy
- 03 At ease
- 04 Or, pleased
- 99 Don't know/No opinion

Q3F Which of the following represents a type of fuel cell? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 PDQ
- 02 PEM
- 03 CFC
- 04 Or, none of these
- 99 Don't know/No opinion

Q4 Next, I am going to read several statements about potential benefits of using hydrogen as a VEHICLE FUEL. For each, tell me if you disagree, are neutral, agree or if you have no opinion? [READ AND ROTATE STATEMENTS]

- 01 Disagree
  - 02 Are neutral
  - 03 Agree
  - 99 No opinion
- 
- A. Using hydrogen will reduce U.S. dependence on foreign oil
  - B. Using hydrogen will reduce emissions and improve air quality
  - C. OMITTED
  - D. Hydrogen is as safe as gasoline and diesel fuels

Q5 Next, I am going to read several potential applications for hydrogen and fuel cells. Please rate the likelihood of widespread commercial availability in the next five years for each of the following applications. The scale to use is low, medium, high or no opinion for each one I mention. [READ AND ROTATE STATEMENTS]

- 01 Low
  - 02 Medium
  - 03 High
  - 99 No opinion
- 
- A. Personal cars and trucks
  - B. Buses and commercial vehicles
  - C. Large power plants
  - D. Small portable devices such as laptop computers or cell phones
  - E. Onsite power for the home
  - F. Onsite power for buildings such as hospitals and schools

Q6 Now, for those same applications, please rate the safety of using hydrogen and fuel cells, in comparison with technology in use today.

Is it not as safe, equally as safe or safer to use hydrogen and fuel cells for...? [READ AND ROTATE EACH STATEMENT]

- 01 Not as safe
- 02 Equally as safe
- 03 Safer
- 99 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q7 The next question is about your use of information sources that can help you make decisions about energy costs and safety. How often do you use each of the following sources to get energy information. Would you say never, sometimes, or frequently? [READ STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Teachers and schools
- B. Friends and family members
- C. Environmental and conservation groups
- D. Utility companies or brokers, for example, gas or electricity providers
- E. Federal government
- F. State government
- G. Local government

Q8 Finally, how often do you get ENERGY information from different types of mass media. Would you say that you never, sometimes, or frequently get energy information from ... [READ AND ROTATE STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Television
- B. Radio
- C. The Internet
- D. Newspapers and non-technical magazines
- E. Science and technology magazines and journals

I have a few questions about you and your household for statistical purposes only.

Q9 What was the last grade in school you completed?

- 01 8TH GRADE OR LESS
- 02 HIGH SCHOOL INCOMPLETE [GRADES 9, 10, 11]
- 03 HIGH SCHOOL COMPLETE [GRADE 12]
- 04 SOME COLLEGE, BUT NO DEGREE
- 05 ASSOCIATES DEGREE
- 06 COLLEGE GRADUATE/BACHELORS DEGREE
- 07 POSTGRADUATE DEGREE, SUCH AS MASTER'S, PH.D., MD, JD
- 99 REFUSED/NR

Q10 What is your age?

- 01 18-20
- 02 21-24
- 03 25-29
- 04 30-34
- 05 35-39
- 06 40-44
- 07 45-49
- 08 50-54
- 09 55-59
- 10 60-64
- 11 65-69
- 12 70-74
- 13 75 OR OLDER
- 99 REFUSED/NR

Q11 Which of the following best describes you? [READ LIST]

- 01 White/Caucasian
- 02 Black/African-American
- 03 Hispanic
- 04 Asian/Asian-American
- 05 American Indian/Native Alaskan
- 06 Some other race
- 99 REFUSED/NR

Q12 How many total telephone numbers does your household have that a person can answer? Please do not include extension phones, cell phones or telephone lines that are used only for a fax or a modem.

- 01 ONE
- 02 TWO
- 03 THREE
- 04 FOUR
- 05 FIVE OR MORE
- 99 DON'T KNOW/REFUSED

That's all the questions we have today. Thank you very much for your time.

CONFIRM PHONE NUMBER.



## APPENDIX A.2 HYDROGEN – STUDENTS

OPINION RESEARCH CORPORATION

JULY 2004

### HYDROGEN-STUDENTS (TEENS 12-17 YEARS OLD) PRE-TEST QUESTIONNAIRE [WITH REVISED INTRODUCTION]

ORC # 34557

BALLOT #  
TELEPHONE #  
SURVEY #

CALL

1000 TEENS 12-17 [TARGET ½ MALES AND ½ FEMALES]  
[50 FOR PRE-TEST]

INTERVIEWERS: MAKE SURE YOU HAVE THE FOLLOWING TO GIVE TO RESPONDENTS AS  
NEEDED OR IF REQUESTED:

- OMB CONTROL NUMBER: 1910-5124
- HFCIT WEBSITE URL: [www.eere.energy.gov/hydrogenandfuelcells](http://www.eere.energy.gov/hydrogenandfuelcells)
- IF ASKED AT ANY POINT DURING THE SURVEY, THE INTERVIEWER SHOULD  
TELL THE RESPONDENT THAT THERE ARE NO TRICK QUESTIONS

Hello, I'm \_\_\_\_ calling from Opinion Research Corporation on behalf of the US Department of Energy. Your household has been randomly selected for an important national research survey about new energy sources. I want to assure you we are not selling any products or services.

S1 Am I speaking to an adult 18 years old or older who lives in this household?

- 01 YES, SPEAKING - > CONTINUE
- 02 NO --> ASK FOR ADULT, REPEAT INTRODUCTION
- 03 NO, NOT AVAILABLE NOW -- > SET CALL BACK
- 04 NO, NOT AVAILABLE UNTIL AFTER FIELD-->THANK AND RECORD AS  
UNAVAILABLE
- 96 BUSINESS -->THANK AND RECORD AS UNUSABLE; BUSINESS
- 97 GROUP QUARTERS --> THANK AND RECORD AS UNUSABLE; GROUP  
QUARTERS
- 98 OTHER NON-HOUSEHOLD - > THANK AND RECORD AS UNUSABLE; OTHER  
NON-HOUSEHOLD
- 99 REFUSED---> THANK, RECORD AS REFUSED AFTER INTRO/HH

S2 Your telephone number has been selected at random to be included in the study. I have a couple of questions to determine who in your household should be interviewed for this study. All of your responses will be confidential . . . how many [INSERT] live in this household?

- 00 NONE
- 01 ONE
- 02 TWO OR MORE
- 99 REFUSED

- A. Adults 18 to 45 years old
- B. Adults over 45 years old
- C. Children under 6 years old
- D. Children 6-11 years old
- E. Children 12 to 17 years old

IF TEENS 12-17, S2E [01,02] CONTINUE.  
IF NO TEENS, S2E [00], THANK AND RECORD AS INELIGIBLE, NO TEEN (S2)  
IF REFUSED TO ANY, S2A-E, AND S2E (TEEN) NOT 01,02, S2A-D, [99], THANK AND RECORD  
AS REFUSED AT SCREEN (S2)

For this interview, the person 12-17 has been selected.. None of the answers will be associated with your household in any way.

S3 May I please speak to the 12-17 year old who had the most recent birthday]? The survey should take about 12 minutes to complete.

- 01 YES --> CONTINUE
- 02 NO, TEEN NOT AVAILABLE --> SET SPECIFIC CALL BACK; RECORD  
TEEN FIRST NAME
- 03 NOT AVAILABLE TILL AFTER FIELD --> THANK AND RECORD AS UNAVAILABLE  
--> THANK AND RECORD AS
- 99 REFUSED TO PARTICIPATE REFUSED ELIGIBLE (S3)PARENT

WHEN TEEN RESPONDENT ON THE PHONE/ON CALLBACK: [READ AS NEEDED]

Hello, I'm \_\_\_\_ calling from Opinion Research Corporation. We're conducting a research survey on behalf of the U.S. Department of Energy about your knowledge and opinions about hydrogen, fuel cells, and the hydrogen economy. Your responses are voluntary; however, every response is extremely important. The survey takes about 12 minutes to complete.

S4 The results to this survey will be used to help design the hydrogen education program for the US Department of Energy. Your answers are confidential and will not be associated with you or your household in any way.

INTERVIEWER RECORD:

1 OK TO CONTINUE

2 NOT CONVENIENT, SET CALL BACK APPOINTMENT; RECORD TEEN FIRST NAME

99 REFUSED --> RECORD AS REFUSED /TEEN IDENTIFIED [S4]

RECORD GENDER

MALE \_\_\_\_

FEMALE \_\_\_\_

CHECK GENDER QUOTAS.

IF FULL, TERMINATE AND RECORD AS INELIGIBLE, QUOTA FILLED

S5 Please tell me, what is your age?

01 12

02 13

03 14

04 15

05 16

06 17

-> CONTINUE

99 REFUSED TO PARTICIPATE -> THANK AND RECORD AS REFUSED AT AGE(S5)

Before we get started, I want to mention that there are both technical and opinion questions in the survey. Tell me what you think or believe, but keep in mind that “no opinion” or “don’t know” are perfectly acceptable responses.

First of all . . .

Q1 I am going to read several statements. After each one, please tell me if you believe the statement is true, if it is false, or if you don’t know. [READ AND ROTATE STATEMENTS]

- 03 True
- 04 False
- 99 Don’t Know

- A. Hydrogen pipelines exist nationwide
- B. In a hydrogen economy, hydrogen replaces fossil fuels as the dominant form of energy
- C. Hydrogen gas is toxic
- D. Fuel cells produce electricity through hydrogen combustion
- E. Hydrogen is too dangerous for everyday use by the general public
- F. OMITTED
- G. Hydrogen is lighter than air
- H. Hydrogen has a distinct odor

Q2A- OMITTED

Q2C

In the next few questions please choose the ONE answer you believe is correct. Keep in mind that you can answer “I don’t know” or “I have no opinion.”

Q3A In which state or condition can hydrogen be stored? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-02]

- 05 Chemical compound
- 06 Liquid
- 07 Both of these
- 08 Or, neither of these
- 99 Don’t know/No opinion

Q3B When using pure hydrogen, fuel cell vehicles generate electricity, water, and what else? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 05 Carbon dioxide
- 06 Nitrous oxides
- 07 Heat
- 08 Or, all of these
- 99 Don’t know/No opinion

Q3C Hydrogen can be produced using which of the following sources of energy? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 05 Natural gas
- 06 Sunlight
- 07 Organic matter
- 08 Or, all of these
- 100 Don't know/No opinion

Q3D Which of the following would you MOST closely associate with the word "hydrogen"? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 05 The H-bomb
- 06 Chemistry class
- 07 Fuel
- 08 Or, the Hindenburg
- 100 Don't know/No opinion

Q3E How would you feel if your local gas station also sold hydrogen? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 05 Frightened
- 06 Uneasy
- 07 At ease
- 08 Or, pleased
- 100 Don't know/No opinion

Q3F Which of the following represents a type of fuel cell? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 PDQ
- 02 PEM
- 03 CFC
- 04 Or, none of these
- 99 Don't know/No opinion

Q4 Next, I am going to read several statements about potential benefits of using hydrogen as a VEHICLE FUEL. For each, tell me if you disagree, are neutral, agree or if you have no opinion. [READ AND ROTATE STATEMENTS]

- 04 Disagree
  - 05 Are neutral
  - 06 Agree
  - 100 No opinion
- 
- A. Using hydrogen will reduce U.S. dependence on foreign oil
  - B. Using hydrogen will reduce emissions and improve air quality
  - C. OMITTED
  - D. Hydrogen is as safe as gasoline and diesel fuels

Q5 Next, I am going to read several potential applications for hydrogen and fuel cells. Please rate the likelihood of widespread commercial availability in the next five years for each of the following applications. The scale to use is low, medium, high or no opinion for each one I mention.  
[READ AND ROTATE STATEMENTS]

- 04 Low
- 05 Medium
- 06 High
- 100 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q6 Now, for those same applications, please rate the safety of using hydrogen and fuel cells, in comparison with technology in use today.

Is it not as safe, equally as safe or safer to use hydrogen and fuel cells for...? [READ AND ROTATE EACH STATEMENT]

- 01 Not as safe
- 02 Equally as safe
- 03 Safer
- 99 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q7 I am going to read several characteristics of new vehicles. Please imagine that you are shopping for an automobile, and rank each of the following characteristics for its importance to you. Would you say it is not important, you are neutral, it is important or you don't have an opinion?  
[READ AND ROTATE STATEMENTS]

- 01 Not important
- 02 Neutral
- 03 Important
- 99 No opinion

- A. Cost of vehicle at the point of sale
- B. Gas mileage
- C. Power and speed
- E. Reliability
- F. Safety
- G. Environmental features, for example non-polluting

Q8 Finally, how often do you get ENERGY information from different types of mass media. Would you say that you never, sometimes, or frequently get energy information from ... [READ AND ROTATE STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Television
- B. Radio
- C. The Internet
- D. Newspapers and non-technical magazines
- E. Science and technology magazines and journals
- F. Classroom instructions
- G. General discussions with family and/or friends

I am going to ask several questions regarding science topics that you may have learned about at school or home or by some other method, for example, church, scouts, the Internet, etc.

ASK QUESTIONS Q9-Q11 IN SEQUENCE FOR A-G
--

Q9 Have you . . . [READ AND ROTATE STATEMENTS]

- 01 YES
- 02 NO
- 99 DON'T KNOW

- A. Received instruction on or otherwise learned about energy use, fuels, and emissions
- B. Received instruction on or otherwise learned about hydrogen and fuel cells
- C. Ever used a demonstration kit to produce hydrogen
- D. Ever used a model fuel cell science kit
- E. Ever seen or used a hydrogen fuel cell model car
- F. Participated in a fuel cell vehicle design competition
- G. Participated in a science bowl or other science competition

[ASK IF YES IN Q9A-G(01)]

Q10 Did the learning or activity take place at school? [IF ASKED, INDICATE THAT "AT SCHOOL" INCLUDES HOME-SCHOOLED ACTIVITIES FOR STUDENTS WHO RECEIVE ALL THEIR EDUCATION VIA HOME SCHOOLING]

- 01 YES
- 02 NO
- 99 DON'T KNOW

- A. Received instruction on or otherwise learned about energy use, fuels, and emissions
- B. Received instruction on or otherwise learned about hydrogen and fuel cells
- C. Ever used a demonstration kit to produce hydrogen
- D. Ever used a model fuel cell science kit
- E. Ever seen or used a hydrogen fuel cell model car
- F. Participated in a fuel cell vehicle design competition
- G. Participated in a science bowl or other science competition

[ASK IF NO/DON'T KNOW IN Q10A-G(02-99)]

Q11 If not at school, where did the learning take place? [DO NOT READ LIST. RECORD ONE ANSWER]

- 01 HOME [FAMILY ACTIVITY, NOT HOME-SCHOOL]
- 02 CHURCH/TEMPLE/RELIGIOUS ORGANIZATION
- 03 SCOUTS
- 04 THE INTERNET
- 195 OTHER [SPECIFY]
- 199 DON'T KNOW

- A. Received instruction on or otherwise learned about energy use, fuels, and emissions
- B. Received instruction on or otherwise learned about hydrogen and fuel cells
- C. Ever used a demonstration kit to produce hydrogen
- D. Ever used a model fuel cell science kit
- E. Ever seen or used a hydrogen fuel cell model car
- F. Participated in a fuel cell vehicle design competition
- G. Participated in a science bowl or other science competition



I have a few questions about you and your household for statistical purposes only.

Q12 What was the last grade of school you completed?

- 01 4TH OR LESS
- 02 5
- 03 6
- 04 7
- 05 8
- 06 9
- 07 10
- 08 11
- 09 12
- 10 FIRST YEAR OF COLLEGE OR MORE
- 11 HOME SCHOOLED
- 99 REFUSED/NR

Q13 Which of the following best describes you? [READ LIST]

- 07 White/Caucasian
- 08 Black/African-American
- 09 Hispanic
- 10 Asian/Asian-American
- 11 American Indian/Native Alaskan
- 12 Some other race
- 100 REFUSED/NR

Q14 How many total telephone numbers does your household have that a person can answer? Please do not include extension phones, cell phones or telephone lines that are used only for a fax or a modem.

- 06 ONE
- 07 TWO
- 08 THREE
- 09 FOUR
- 10 FIVE OR MORE
- 100 DON'T KNOW/REFUSED

That's all the questions we have today. Thank you very much for your time.

CONFIRM PHONE NUMBER.

## APPENDIX A.3 HYDROGEN – STATE AND LOCAL GOVERNMENT AGENCIES

OPINION RESEARCH CORPORATION

AUGUST-SEPTEMBER 2004

### HYDROGEN-STATE AND LOCAL GOVERNMENT AGENCIES

ORC # 34559

BALLOT #  
TELEPHONE #  
SURVEY #

CALL

### QUOTA CELLS/TARGETS

246 total respondents

TELEPHONE NUMBER: (     ) \_\_\_\_\_ TIME ENDED: \_\_\_\_\_

TIME STARTED: \_\_\_\_\_

LENGTH: \_\_\_\_\_ (MINUTES)

DATE: \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

I.D.: \_\_\_\_\_

INTERVIEWERS: MAKE SURE YOU HAVE THE FOLLOWING TO GIVE TO RESPONDENTS AS  
NEEDED OR IF REQUESTED:

- OMB CONTROL NUMBER: 1910-5124
- HFCIT WEBSITE URL: [www.eere.energy.gov/hydrogenandfuelcells](http://www.eere.energy.gov/hydrogenandfuelcells)
- IF ASKED AT ANY POINT DURING THE SURVEY, THE INTERVIEWER SHOULD  
TELL THE RESPONDENT THAT THERE ARE NO TRICK QUESTIONS

AT INTRO SCREEN, DISPLAY INFO FOR INTERVIEWER: RESPONDENT NAME, TITLE  
AND AGENCY CONTACTED

SA May I please speak to [INSERT RESPONDENT NAME FROM SAMPLE]?

- |    |                            |                                     |
|----|----------------------------|-------------------------------------|
| 01 | <u>YES</u>                 | -->CONTINUE                         |
| 02 | <u>NOT AVAILABLE NOW</u>   | -->SCHEDULE CALLBACK                |
| 03 | <u>NO LONGER AT AGENCY</u> | -->SKIP TO S2                       |
| 99 | <u>REFUSED</u>             | -->THANK AND RECORD AS REFUSED (SA) |

Hello, my name is \_\_\_\_ calling from Opinion Research Corporation on behalf of the US Department of Energy. Your agency has been selected for an important national research survey about new energy sources. You have (your office has) been sent a letter from Steve Chalk, Program Manager of DOE's Hydrogen, Fuel Cells and Infrastructure Technologies Program, which explained the purpose and importance of this survey. The survey takes about 12 minutes to complete.

- (S1)

The Department of Energy is sponsoring a survey of state and local agencies and your agency has been selected for this important national research about new energy sources. Your responses are confidential and your agency's name will not be associated with the survey results. While your responses are voluntary, every response is extremely important because the results to this survey will be used to help design the hydrogen education program for the U.S. Department of Energy.

- S2 [IF SA(03) READ] Can you please give me the name, title and telephone number of the person who now fills the position vacated by [INSERT RESPONDENT NAME]?

01	<u>YES</u>	-->CONTINUE
99	<u>NO/REFUSED</u>	-->THANK AND RECORD AS REFUSED (S2)

Telephone number: 2d

```

01 FIRST NAME INCORRECT/CHANGE
02 LAST NAME INCORRECT/CHANGE
03 TITLE INCORRECT/CHANGE
04 TELEPHONE NUMBER INCORRECT/CHANGE
05 ALL INFORMATION CORRECT
99 REFUSED -->THANK AND RECORD AS REFUSED (S2VER)

```

4/20/06

OTHERWISE, IF PROVIDED NEW CONTACT INFO, S2[1], S2VER[05] SCHEDULE CALLBACK.

Before we get started, I want to mention that there are both technical and opinion questions in the survey. Tell me what you think or believe, but keep in mind that “no opinion” or “don’t know” are perfectly acceptable responses.

First of all . . .

Q1 I am going to read several statements. After each one, please tell me if you believe the statement is true, if it is false, or if you don’t know. [READ AND ROTATE STATEMENTS]

- 05 True
- 06 False
- 99 Don’t Know

- A. Hydrogen pipelines exist nationwide
- B. In a hydrogen economy, hydrogen replaces fossil fuels as the dominant form of energy
- C. Hydrogen gas is toxic
- D. Fuel cells produce electricity through hydrogen combustion
- E. Hydrogen is too dangerous for everyday use by the general public
- F. OMITTED
- G. Hydrogen is lighter than air
- H. Hydrogen has a distinct odor

Q2A-Q2C OMITTED

In the next few questions please choose the ONE answer you believe is correct. Keep in mind that you can answer “I don’t know” or “I have no opinion.”

Q3A In which state or condition can hydrogen be stored? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-02]

- 09 Chemical compound
- 10 Liquid
- 11 Both of these
- 12 Or, neither of these
- 99 Don’t know/No opinion

Q3B When using pure hydrogen, fuel cell vehicles generate electricity, water, and what else? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 09 Carbon dioxide
- 10 Nitrous oxides
- 11 Heat
- 12 Or, all of these
- 99 Don’t know/No opinion

Q3C Hydrogen can be produced using which of the following sources of energy? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 09 Natural gas
- 10 Sunlight
- 11 Organic matter
- 12 Or, all of these
- 101 Don't know/No opinion

Q3D Which of the following would you MOST closely associate with the word "hydrogen"? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 09 The H-bomb
- 10 Chemistry class
- 11 Fuel
- 12 Or, the Hindenburg
- 101 Don't know/No opinion

Q3E How would you feel if your local gas station also sold hydrogen? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 09 Frightened
- 10 Uneasy
- 11 At ease
- 12 Or, pleased
- 101 Don't know/No opinion

Q3F Which of the following represents a type of fuel cell? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 PDQ
- 02 PEM
- 03 CFC
- 04 Or, none of these
- 99 Don't know/No opinion

Q4 Next, I am going to read several statements about potential benefits of using hydrogen as a VEHICLE FUEL. For each, tell me if you disagree, are neutral, agree or if you have no opinion? [READ AND ROTATE STATEMENTS]

- 07 Disagree
  - 08 Are neutral
  - 09 Agree
  - 101 No opinion
- 
- A. Using hydrogen will reduce U.S. dependence on foreign oil
  - B. Using hydrogen will reduce emissions and improve air quality
  - C. OMITTED
  - D. Hydrogen is as safe as gasoline and diesel fuels

Q5 Next, I am going to read several potential applications for hydrogen and fuel cells. Please rate the likelihood of widespread commercial availability in the next five years for each of the following applications. The scale to use is low, medium, high or no opinion for each one I mention.  
[READ AND ROTATE STATEMENTS]

- 07 Low
- 08 Medium
- 09 High
- 101 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q6 Now, for those same applications, please rate the safety of using hydrogen and fuel cells, in comparison with technology in use today.

Is it not as safe, equally as safe or safer to use hydrogen and fuel cells for...? [READ AND ROTATE EACH STATEMENT]

- 01 Not as safe
- 02 Equally as safe
- 03 Safer
- 99 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q7 The next question is about your use of information sources that can help you make decisions about energy costs and safety. How often do you use each of the following sources to get energy information. Would you say never, sometimes, or frequently? [READ STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Teachers and schools
- B. Friends and family members
- C. Environmental and conservation groups
- D. Utility companies or brokers, for example, gas or electricity providers
- E. Federal government
- F. State government
- G. Local government

Q8 How often do you get ENERGY information from different types of mass media. Would you say that you never, sometimes, or frequently get energy information from ... [READ AND ROTATE STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Television
- B. Radio
- C. The Internet
- D. Newspapers and non-technical magazines
- E. Science and technology magazines and journals

Our final set of questions relates to your specific agency and plans that you may have for future use of hydrogen and/or fuel cells.

Q9 Does your agency operate any hydrogen-powered vehicles?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q10 Do you know of any other organization that operates hydrogen-powered buses or other fleet vehicles in the area covered by your geographic jurisdiction?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q11 Does your agency own or operate any stationary fuel cells?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q12 Do you know of any other organization that operates stationary fuel cells in the area covered by your geographic jurisdiction?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q13 Does your agency have plans to use hydrogen or fuel cells in the future?

- 01 YES -->CONTINUE
- 02 NO
- 99 DON'T KNOW -->SKIP TO Q15

Q14 What is the time frame for plans to use hydrogen or fuel cells? [READ LIST. RECORD ONE ANSWER]

- 01 Within the next year
- 02 1-5 years
- 03 Over 5 years
- 99 DON'T KNOW

Q15 How do you feel about the use of hydrogen and fuel cells in or around the workplace? [READ LIST. RECORD ONE ANSWER]

- 01 Pleased
- 02 At ease
- 03 Uneasy
- 04 Frightened
- 99 Don't know/No opinion

Q16 Have you received information at your workplace concerning hydrogen and/or fuel cells?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q17 Have you attended any of the following events? [READ AND ROTATE ITEMS]

- 01 YES
- 02 NO
- 99 DON'T KNOW

- A. A training class on hydrogen or fuel cells
- B. A press conference concerning the use of hydrogen or fuel cells
- C. A conference or workshop that included a session on hydrogen or fuel cells

Q18 Would a DOE-sponsored class, conference or workshop on hydrogen and fuel cells be of value to you?

- 01 YES
- 02 NO
- 99 DON'T KNOW

Q19 Finally, can you please tell me your full title? [RECORD RESPONDENT TITLE]

That's all the questions we have today. Thank you very much for your time.

CONFIRM PHONE NUMBER.



## APPENDIX A.4 HYDROGEN – POTENTIAL LARGE-SCALE END USERS

OPINION RESEARCH CORPORATION

SEPTEMBER-OCTOBER 2004

### HYDROGEN-LARGE SCALE END USERS

ORC # 34558

BALLOT #  
TELEPHONE #  
SURVEY #

CALL

### QUOTA CELLS/TARGETS

99 total respondents

TELEPHONE NUMBER: (    ) \_\_\_\_\_ TIME ENDED: \_\_\_\_\_

TIME STARTED: \_\_\_\_\_

LENGTH: \_\_\_\_\_ (MINUTES)

DATE: \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

I.D.: \_\_\_\_\_

INTERVIEWERS: MAKE SURE YOU HAVE THE FOLLOWING TO GIVE TO RESPONDENTS AS  
NEEDED OR IF REQUESTED:

- OMB CONTROL NUMBER: 1910-5124
- HFCIT WEBSITE URL: [www.eere.energy.gov/hydrogenandfuelcells](http://www.eere.energy.gov/hydrogenandfuelcells)
- IF ASKED AT ANY POINT DURING THE SURVEY, THE INTERVIEWER SHOULD  
TELL THE RESPONDENT THAT THERE ARE NO TRICK QUESTIONS

[AT SWITCHBOARD]

SA     May I please speak to the person who is most responsible for energy related decisions at this  
location? [INTERVIEWER: SEE HELP SHEET FOR POSSIBLE TITLES FOR THIS SEGMENT]

04     YES \_\_\_\_\_ -->CONTINUE  
05     NOT AVAILABLE NOW \_\_\_\_\_ -->SCHEDULE CALLBACK  
100    REFUSED \_\_\_\_\_ -->THANK AND RECORD AS REFUSED (SA)

(READ ONCE RESPONDENT IS ON THE PHONE)

Hello, my name is \_\_\_\_ calling from Opinion Research Corporation on behalf of the US Department of Energy. The DOE is sponsoring a survey about energy sources with business leaders in your sector. Each company we contact is an important part of the survey process and we urge you or someone within your organization to participate. Every response is valuable in this survey because the results will be used to help design the hydrogen education program for the Department of Energy. Are you the person most responsible for energy related decisions at this location?

S1     01     YES, CONTINUE WITH SURVEY     -->SKIP TO TEXT BEFORE Q1  
       02     NOT CONVENIENT NOW     -->SET CALL BACK APPOINTMENT  
       03     NOT APPROPRIATE PERSON TO CONDUCT INTERVIEW -->CONTINUE TO S2  
       99     REFUSED     -->THANK AND RECORD AS REFUSED

(S1)

S2     Can you please give me the name, title and telephone number of the person who is best suited to represent your organization for this survey?

01     YES     -->RECORD INFORMATION AND ARRANGE CALLBACK  
100    NO/REFUSED     -->THANK AND RECORD AS REFUSED (S2)

Before we begin I would like you to know that your responses are confidential and you and your company name will not be associated with the results. It should take about 12 minutes to complete.

Our first set of questions relates to you or the specific facility or facilities for which you are responsible.

Q1 I am going to read several job titles; please tell me which one applies to you. [READ LIST. RECORD ONE ANSWER]

- 07 Fleet manager
- 08 Plant or facility manager
- 09 Operations manager
- 10 Financial manager
- 11 Energy manager
- 12 CEO
- 195 Something else [SPECIFY]
- 199 DON'T KNOW/REFUSED

Q2 How many years have you held this position? [READ LIST. RECORD ONE ANSWER]

- 01 Less than one year
- 02 Between one and five years
- 03 Over five years
- 99 DON'T KNOW/REFUSED

[ASK IF RESPONDENT IS IN "TRANSPORTATION" CATEGORY]

Q3A How many vehicles are in the GROUND-BASED fleet operated by your organization or agency? [DO NOT READ LIST. RECORD ONE ANSWER]

- 01 LESS THAN 100
- 02 100-1,000
- 03 1,001-10,000
- 04 OVER 10,000
- 99 DON'T KNOW/REFUSED

[ASK IF RESPONDENT IS IN "NEEDS UNINTERRUPTED POWER" OR "LARGE POWER REQUIREMENTS" CATEGORIES]

Q3B What is the average annual cost of electrical energy for your organization or agency? [DO NOT READ LIST. RECORD ONE ANSWER]

- 01 UNDER \$100,000
- 02 \$100,000 TO \$1,000,000
- 03 \$1,000,001 TO \$2,000,000
- 04 OVER \$2,000,000
- 99 DON'T KNOW/REFUSED

Q4 I am going to read some characteristics of fuels or power supplies. Please rate the importance of each characteristic for your facility, using a scale of low, medium, high or no opinion. [READ AND ROTATE STATEMENTS]

- 01 Low
- 02 Medium
- 03 High
- 99 No opinion

- A. System installation cost
- B. System maintenance cost
- C. Fuel cost
- D. Dependability
- E. Safety
- F. Protection of the environment
- G. Uninterrupted availability

Q5 Does your organization use hydrogen and/or fuel cells for any purpose?

- 01 YES -->CONTINUE
- 02 NO
- 99 DON'T KNOW -->SKIP TO Q7

Q6 What is the PRIMARY function of the hydrogen and/or fuel cells used by your organization? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER]

- 01 To power buses
- 02 To power vehicles other than buses
- 03 To provide stationary on-site power
- 04 To provide power for small portable equipment
- 05 To provide back-up power
- 195 OTHER [SPECIFY]
- 199 DON'T KNOW/REFUSED

[ASK IF Q5(02,99)]

Q7 Does your organization have plans to use hydrogen or fuel cells in the future?

- 01 YES -->CONTINUE
- 02 NO
- 99 DON'T KNOW -->SKIP TO Q9

Q8 What is the time frame for your plans to use hydrogen or fuel cells? [READ LIST. RECORD ONE ANSWER]

- 04 Within the next year
- 05 1-5 years
- 06 Over 5 years
- 100 DON'T KNOW

[ASK EVERYONE]

Q9 Have you received information at your workplace concerning hydrogen and/or fuel cells?

03 YES

04 NO

100 DON'T KNOW

Q10 Have you attended any of the following events? [READ AND ROTATE ITEMS]

03 YES

04 NO

99 DON'T KNOW

A. A training class on hydrogen or fuel cells

B. A press conference concerning the use of hydrogen or fuel cells

C. A conference or workshop that included a session on hydrogen or fuel cells

Q11 Would a "Hydrogen 101" class, or training at a conference or workshop sponsored by the U.S. Department of Energy on hydrogen and fuel cells be of value to you?

03 YES

04 NO

100 DON'T KNOW

For the upcoming questions, I want to mention that there are both technical and opinion questions. Tell me what you think or believe, but keep in mind that “no opinion” or “don’t know” are perfectly acceptable responses.

First of all . . .

Q12 I am going to read several statements. After each one, please tell me if you believe the statement is true, if it is false, or if you don’t know. [READ AND ROTATE STATEMENTS]

- 01 True
- 02 False
- 99 Don’t Know

- A. Hydrogen pipelines exist nationwide
- B. In a hydrogen economy, hydrogen replaces fossil fuels as the dominant form of energy
- C. Hydrogen gas is toxic
- D. Fuel cells produce electricity through hydrogen combustion
- E. Hydrogen is too dangerous for everyday use by the general public
- F. Hydrogen is lighter than air
- G. Hydrogen has a distinct odor

In the next few questions please choose the ONE answer you believe is correct. Keep in mind that you can answer “I don’t know” or “I have no opinion.”

Q13A In which state or condition can hydrogen be stored? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-02]

- 13 Chemical compound
- 14 Liquid
- 15 Both of these
- 16 Or, neither of these
- 99 Don’t know/No opinion

Q13B When using pure hydrogen, fuel cell vehicles generate electricity, water, and what else? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 13 Carbon dioxide
- 14 Nitrous oxides
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- 13 Natural gas
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- 15 Organic matter
- 16 Or, all of these
- 102 Don’t know/No opinion

Q13D Which of the following would you MOST closely associate with the word “hydrogen”? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 13 The H-bomb
- 14 Chemistry class
- 15 Fuel
- 16 Or, the Hindenburg
- 102 Don't know/No opinion

Q13E How would you feel if your local gas station also sold hydrogen? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER.]

- 13 Frightened
- 14 Uneasy
- 15 At ease
- 16 Or, pleased
- 102 Don't know/No opinion

Q13F Which of the following represents a type of fuel cell? [READ ENTIRE LIST BEFORE RECORDING ONE ANSWER. ROTATE 01-03]

- 01 PDQ
- 02 PEM
- 03 CFC
- 04 Or, none of these
- 99 Don't know/No opinion

Q14 Next, I am going to read several statements about potential benefits of using hydrogen as a VEHICLE FUEL. For each, tell me if you disagree, are neutral, agree or if you have no opinion? [READ AND ROTATE STATEMENTS]

- 10 Disagree
- 11 Are neutral
- 12 Agree
- 102 No opinion

- A. Using hydrogen will reduce U.S. dependence on foreign oil
- B. Using hydrogen will reduce emissions and improve air quality
- C. Hydrogen is as safe as gasoline and diesel fuels

Q15 Next, I am going to read several potential applications for hydrogen and fuel cells. Please rate the likelihood of widespread commercial availability in the next five years for each of the following applications. The scale to use is low, medium, high or no opinion for each one I mention.  
[READ AND ROTATE STATEMENTS]

- 10 Low
- 11 Medium
- 12 High
- 102 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools

Q16 Now, for those same applications, please rate the safety of using hydrogen and fuel cells, in comparison with technology in use today.

Is it not as safe, equally as safe or safer to use hydrogen and fuel cells for...? [READ AND ROTATE STATEMENTS]

- 01 Not as safe
- 02 Equally as safe
- 03 Safer
- 99 No opinion

- A. Personal cars and trucks
- B. Buses and commercial vehicles
- C. Large power plants
- D. Small portable devices such as laptop computers or cell phones
- E. Onsite power for the home
- F. Onsite power for buildings such as hospitals and schools



Q17 The next question is about your use of information sources that can help you make decisions about energy costs and safety. How often do you use each of the following sources to get energy information. Would you say never, sometimes, or frequently? [READ STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Trade shows and conferences
- B. Friends and family members
- C. Environmental and conservation groups
- D. Utility companies or brokers, for example, gas or electricity providers
- E. Federal government
- F. State government
- G. Local government

Q18 How often do you get ENERGY information from different types of mass media. Would you say that you never, sometimes, or frequently get energy information from ... [READ AND ROTATE STATEMENTS]

- 01 Never
- 02 Sometimes
- 03 Frequently
- 99 DON'T KNOW

- A. Television
- B. Radio
- C. The Internet
- D. Newspapers and general interest magazines
- E. Science and technology magazines and journals
- F. Business or trade magazines

That's all the questions we have today. Thank you very much for your time.

CONFIRM PHONE NUMBER.

